
EXTENSIVE CURRICULUM
VITAE

IOANNIS
PAVLOPOULOS

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IN T E R N A T I O N S

Full Name: Ioannis Pavlopoulos

Date of birth: 6 August 1983

Email address: annis@aueb.gr
ioannis@dsv.su.se

Website: <https://ipavlopoulos.github.io>

P R O L E R A T I O N O F T H E P R O C T I O N O F T H E

- Co1, Co2: Research project contracts.
- Co 3-Co 8, Co 10: Teaching contracts.
- Co9: Postdoctoral research contract.
- Ce4: Certificate of postdoctoral research.
- Ce1, Ce2: Certificate/Certificate of Service Fulfillment.
- Ce3: Birth certificate.
- D1: Solemn declaration of fulfilment of military obligations.
- A 1, A2: Thomaidio prize.
- Sc1, SC 2, SC3: Scholarships.
- S1-S38: Conference papers.
- D1-P10: Articles in journals.
- M1, M2: Monographs.
- Sn1: Recognition of postgraduate degree by DOATAP.

RESEARCHINTERESTS

My scientific work focuses on Natural Language Processing and focuses on:

- Machine and deep learning for text and images
- Information mining (sentiment, entity names) from large collections of documents
- Categorization such as for diagnosis or infiltration of unwanted content
- Natural language text production .

SPoHYDES

2010 – 2014: Department of Informatics, School of Information Sciences and Technology, Athens University of Economics and Business, Greece. PhD in Natural Language Processing. Thesis title: Aspect Based Sentiment Analysis ([link](#)).

2008 – 2009: Department of Computer Science, University of Edinburgh, UK. Master in Artificial Intelligence. Thesis Title: Automatic Text Illustration (Sn1).

2001 – 2007: School of Applied Mathematics and Physical Applications, National Technical University of Athens, Greece. Thesis title : Method development of Genetic Programming Neural Networks for the investigation of the genetic and environmental underlay of diseases.

PROFESSIONAL EXPERIENCE

- [Ca' Foscari University of Venice, Department of Humanities](#)
 - Visiting scholar in Natural Language Processing (1/12/2021 – 31/8/2022).
Co-organization of the 1st international academic competition [HTREC](#), member of the editorial team of the [International Journal for Public and Digital Humanities](#).
- [Stockholm University, Department of Computer and System Sciences](#)
 - Lecturer (on a fixed-term contract) in Natural Language Processing (Co10: 1/6/2020 – 30/11/2021).
 - Postdoctoral researcher in Data Science (Co9: 1/10/2019 – 31/5/2020).
- [Google Jigsaw](#)
 - Research Associate (1/10/2018 -- today).
- [Cognitiv+](#)
 - Data Scientist (1/9/2018 – 1/4/2019)
 - § Identification of context and obliquity in legal texts. §
Manage a group of taggers.
- [Liquid Media](#) / Straintek
 - Principal Investigator (1/7/ 2016 – 1/7/2018)
 - § Manage a team of developers and engineers for development and installation of spam detection software and APIs .
 - § Unwanted language detection research (Greek, English, German).
 - § Deep learning applications.
 - Postdoctoral Researcher (1/7/2015 – 1/7/2016)
 - § Machine Learning to detect unwanted language.
 - § Principal author of proposals for funding.
- [Hellenic Army Support Computer Center](#) (Co 11, Co12)
 - Software development (1/9/2014 – 1/6/2015).
- [BioASQ](#) (1/9/2012 – 1/9/2014)
 - Study of evaluation measures for questions and answer systems in bioinformatics.
 - Modeling of word embeddings from corpora biology and bioinformatics ([available](#)).
- [IMC Technologies](#)
 - Research & Development Engineer (1/9/2010 – 1/9/2012)
 - § Design and implementation of text search solutions and on the web (crawling), and opinion mining within e-Government.
- DBNet, Athens University of Economics and Business.
 - Research Associate (1/9/ 2009 – 1/9/2010)
 - § Application of Markov Models to time series data from WebTime-Series Data.
- [Demokritos](#) (1/7/2007 – 1/8/2008)
 - Scientific collaborator.

§ Design and development of Neural Network systems. §
Co-authorship of European research proposals.

- [Oracle Hellas](#)
 - o Software development and practical work (1/10/2005 – 1/12/2005)

TEACHING EXPERIENCE

Teaching:

- Lecturer in Language Technology in the Postgraduate Program of Digital Methods for the Humanities of the Athens University of Economics and Business (Co 4, Co5).
 - Lecturer in Practical Data Science in the Master of Science Program Athens University of Economics and Business Data (Co 6, Co 7, Co 8).
- Lecturer in Language Technology at Stockholm University, Sweden, in PhD candidates (Co9).
- Visiting lecturer in Data Science at Stockholm University, Sweden (Co10).

Co-teaching:

- Lecturer in Language Technology in the Postgraduate Program of Digital Methods for the Humanities of the Athens University of Economics and Business (Co3).

Supervision of post-graduate work:

- Korres Katerina. Using Predictive Text for Grammatical Error Correction in Second Language Learning (2020). Thesis for the MSc in Digital Methods for the Humanities, AUEB
- Fasoi Maria. Linguistic modeling for authorship in Homeric texts (2020). Thesis for the MSc in Digital Methods for Humanities Sciences, AUEB
- Chatzipanagiotou Marita. Geographical attribution of Greek inscriptions using machine learning and deep learning methods (2020). Thesis for the MSc in Digital Methods for the Humanities, AUEB
- Kuyia Basilica.
- Stroumpouli Eleftheria. Error Detection in English and Greek texts written by foreign learners (2020). Thesis for the MSc in Digital Methods for the Humanities, AUEB
 - Glynatsi Katerina. Toxicity detection: reading between the lines (2020). Thesis on M.Sc. in Digital Methods for the Humanities, AUEB
 - Antoniou Marili. Identifying toxic speech in online discussions (2020). Thesis on M.Sc. in Digital Methods for the Humanities, AUEB
 - Hasapis Alexandros. Text classification for the detection of food recalls (2020). Thesis on the MSc in Data Science, AUEB
- ThalaSisinou Lislevent Marina. Emotion Classification on Greek Texts (2020). Thesis on the MSc in Data Science, AUEB

Co-supervision of postgraduate theses:

- Kougia Vasiliki. Medical Image Labeling and Report Generation (2019). Thesis on M.Sc. in Computer Science, AUEB
- Koutsikakis Ioannis. Toxicity Detection in User Generated Content (2018). Thesis on M.Sc. in Computer Science, AUEB

CONCESSIONS AND DISCRIMINATION

- Securing a 'Google Research Award' for my postdoctoral research (Co1).
- 'PriceWaterhouseCoopers' scholarship for postgraduate studies (SC1).
- 'Thomaidio Prize' for the best diploma thesis of the year at NTUA (A 1, A2).
- 'Ganiotis-Papageorgis' scholarship for undergraduate studies (Sc3).
- 'Aglaia Koufodimou' scholarship for undergraduate studies (Sc2).

PUBLICATIONS

Articles in proceedings of scientific conferences with full review:

- A1. Vrettaros, I., Pavlopoulos, I., Vouros, G., & Drigas, A. S. "The Development of a Self-Assessment System for the Learners' Answers with the Use of GPNN." *World Summit on Knowledge Society (WSKS)*, Athens, Greece, (2008), pp. 332-340.
- A2. Voudigari, E., Pavlopoulos, I., & Vazirgiannis, M. "A Framework for Web Page Rank Prediction." *Engineering Applications of Neural Networks / Artificial Intelligence Applications and Innovations*, Corfu, Greece, (2011), pp. 240-249.
- A3. Alexopoulos, P., Pavlopoulos, I., Wallace, M., & Kafetzis, K. "Exploiting Ontological Relations for Automatic Semantic Tag Recommendation." *International Conference on Semantic Systems*, Graz, Austria, (2011), pp. 105-110.
- A4. Alexopoulos, P., Pavlopoulos, I., & Mylonas, P. "Learning Vague Knowledge from Socially Generated Content in an Enterprise Framework." *IFIP Advances in Information and Communication Technology, Artificial Intelligence Applications and Innovations*, Halkidiki, Greece, (2012), pp. 510-519.
- A5. Anadiotis, G., Kafentzis, K., Pavlopoulos, I., & Westerski, A. "Building Consensus via a Semantic Web Collaborative Space." *WWW*, Lyon, France, (2012), pp. 1097-1106.
- A6. Pavlopoulos, I., & Androutsopoulos, I. "Multi-granular Aspect Aggregation in Aspect-based Sentiment Analysis." *EACL*, Gothenburg, Sweden, (2014), pp. 78-87.
- A7. Karabatsis, R. M., Pavlopoulos, I., & Malakasiotis, P. "AUEB: Two-stage Sentiment Analysis of Social Network Messages." *SemEval in ACL*, Dublin, Ireland, (2014), pp. 114-118.
- A8. Pavlopoulos, I., & Androutsopoulos, I. "Aspect Term Extraction for Sentiment Analysis: New Datasets, New Evaluation Measures, and an Improved Unsupervised Method." *Workshop on Language Analysis for Social Media in EACL*, Gothenburg, Sweden, (2014), pp. 44-52.
- A9. Pontiki, M., Galanis, D., Pavlopoulos, I., Papageorgiou, C., Androutsopoulos, I., & Manandhar, S. "Semeval-2014 Task 4: Aspect-based Sentiment Analysis." *SemEval in COLING*, Dublin, Ireland, (2014), pp. 27-35.
- A10. Xenos, D., Theodorakakos, P., Pavlopoulos, I., Malakasiotis, P., & Androutsopoulos, I. "AUEB-ABSA at SemEval-2016 Task 5: Supervised Machine Learning for Aspect-based Sentiment Analysis." *SemEval in NAACL:HLT*, San Diego, California, USA, (2016), pp. 312-317.
- A11. Giorgis, S., Rousas, A., Pavlopoulos, I., Malakasiotis, P., & Androutsopoulos, I. "AUEB.Twitter.Sentiment at SemEval-2016 Task 4: A Weighted Ensemble of SVMs for Twitter Sentiment Analysis." *SemEval in NAACL:HLT*, San Diego, California, USA, (2016), pp. 96-99.
- A12. Pavlopoulos, I., Malakasiotis, P., & Androutsopoulos, I. "Deeper Attention to Abusive User Comment Moderation." *EMNLP*, Copenhagen, Denmark, (2017), pp. 1125-1135.

- A13. Pavlopoulos, I., Malakasiotis, P., & Androutsopoulos, I. "Deep Learning for User Comment Moderation." *Abusive Language Workshop in ACL*, Vancouver, BC, Canada, (2017), pp. 25-35.
- A14. Pavlopoulos, I., Malakasiotis, P., Bakagianni, G., & Androutsopoulos, I. "Improved Abusive Comment Moderation with User Embeddings." *Natural Language Processing Meets Journalism Workshop in EMNLP*, Copenhagen, Denmark, (2017), pp. 51-55.
- A15. Kougia, V., Pavlopoulos, I., & Androutsopoulos, I. "A Survey of Biomedical Image Captioning." *Shortcomings in Vision and Language NAACL Workshop*, Minneapolis, MN, USA, (2019), pp. 26-36.
- A16. Kougia, V., Pavlopoulos, I., & Androutsopoulos, I. "AUEB NLP Group at ImageCLEFmed Caption 2019." *International Conference and Labs of the Evaluation Forum for European Languages*, (2019).
- A17. Kougia, V., Pavlopoulos, I., & Androutsopoulos, I. "Medical Image Tagging with Neural Retrieval and Deep Learning." *LNCS (Online)*, (2020), pp. 154-166.
- A18. Pavlopoulos, I., & Papapetrou, P. "Clinical Predictive Keyboard using Statistical and Neural Language Modeling." *IEEE Computer Based Medical Systems (Online)*, (2020), pp. 293-296.
- A19. Pavlopoulos, I., Sorensen, J., Dixon, L., Thain, N., & Androutsopoulos, I. "Toxicity Detection: Does Context Really Matter?" *ACL (Online)*, (2020), pp. 4296-4305.
- A20. Karatzas, V., Kougia, V., Pavlopoulos, I., & Androutsopoulos, I. "AUEB NLP Group at ImageCLEFmed Caption 2020." *International Conference and Labs of the Evaluation Forum for European Languages (Online)*, (2020).
- A21. Korre, A., & Pavlopoulos, I. "ERRANT: Assessing and Improving Grammatical Error Type Classification." *Workshop on Computational Linguistics for Cultural Heritage, Social Sciences, Humanities and Literature (Online)*, (2020), pp. 85-89.
- A22. Laughier, L., Pavlopoulos, I., Sorensen, J., & Dixon, L. "Civil Rephrases Of Toxic Texts With Self-Supervised Transformers." *EACL (Online)*, (2021), pp. 1442-1461.
- A23. Pavlopoulos, I., Laughier, L., Sorensen, J., & Androutsopoulos, I. "SemEval-2021 Task 5: Toxic Spans Detection." *SemEval in ACL-IJCNLP (Online)*, (2021), pp. 59-69.
- A24. Pavlopoulos, I., & Papapetrou, P. "Customized Neural Predictive Medical Text: A Use-Case on Caregivers." *International Conference on Artificial Intelligence in Medicine (Online)*, (2021), pp. 438-443.
- A25. Xenos, A., Pavlopoulos, I. (corresponding author), & Androutsopoulos, I. "Context Sensitivity Estimation in Toxicity Detection." *Workshop on Online Abuse and Harms in ACL (Online)*, (2021), pp. 140-145.
- A26. Korre, K., Chatzipanagiotou, M., & Pavlopoulos, I. "ELERRANT: Automatic Grammatical Error Type Classification for Greek." *RANLP (Online)*, (2021), pp. 713-722.
- A27. Kougia, V., & Pavlopoulos, I. "Multimodal or Text? Retrieval or BERT? Benchmarking Classifiers for the Shared Task on Hateful Memes." *Workshop on Online Abuse and Harms (WOAH 2021) (Online)*, (2021), pp. 220-225.

- A28. Miliou, I., Pavlopoulos, I., & Papapetrou, P. "Sentiment Nowcasting During the COVID-19 Pandemic." *International Conference on Discovery Science (Online)*, (2021), pp. 218-228.
- A29. Ljungman, J., Lislevand, V., Pavlopoulos, I., FaraZouli, A., Lee, Z., Papapetrou, P., & Fors, U. "Automated Grading of Exam Responses: An Extensive Classification Benchmark." *International Conference on Discovery Science (Online)*, (2021), pp. 3-18..
- A30. Fasoi, M., Pavlopoulos, I., & Konstantinidou, M. "Computational Authorship Analysis of Homeric Language." *Digital Humanities Workshop (Online)*, (2021), pp. 78-88, <https://dl.acm.org/doi/10.1145/3526242.3526256>.
- A31. Chatzipanagiotou, M., Ewa Machotka, & Pavlopoulos, I. "Automated Recognition of Geographical Named Entities in Titles of Ukiyo-e Prints." *Digital Humanities Workshop (Online)*, (2021), pp. 70-77, <https://doi.org/10.1145/3526242.3526254>.
- A32. Pavlopoulos, I., Laugier, L., Xenos, A., Sorensen, J., & Androutsopoulos, I. "From the Detection of Toxic Spans in Online Discussions to the Analysis of Toxic-to-Civil Transfer." *Association for Computational Linguistics (Online)*, (2022), pp. 3721-3734.
- A33. Pavlopoulos, I., Machotka, E., & Liangou, K. "A Study of Distant Viewing of Ukiyo-e Prints." *Language Resources and Evaluation Conference*, Massalia, France, (2022), pp. 5879-5888.
- A34. Korres, K., & Pavlosopoulos, I. "Enriching Grammatical Error Correction Resources for Modern Greek." *Language Resources and Evaluation Conference*, Massalia, France, (2022), pp. 4984-4991.
- A35. Platanou, P., Pavlopoulos, I., & Papaioannou, G. "Handwritten Paleographic Greek Text Recognition: A Century-Based Approach." *Language Resources and Evaluation Conference*, Massalia, France, (2022), pp. 6585-6589.
- A36. Pavlopoulos, I., Henos, A., & Picca, D. "Sentiment Analysis of Homeric Text: The 1st Book of Iliad." *Language Resources and Evaluation Conference*, Massalia, France, (2022), pp. 7071-7077.
- A37. Zonios, Ch., Pavlopoulos, I., & Lucas, A. "Transformer-Based Music Language Modelling and Transcription." *Proceedings of the 12th Hellenic Conference on Artificial Intelligence*, Corfu, Greece, (2022), pp. 1-8.
- A38. Dritsa, K., Thomas, A., Pavlopoulos, I., & Louridas, P. "A Greek Parliament Proceedings Dataset for Computational Linguistics and Political Analysis." *NIPS (Will Appear)*.

Publications in journals:

- T1. **Vrettaros, G., Pavlopoulos, I., Dringias, A. S., & Chrysagis, K.** "GPNN Techniques in Learning Assessment Systems." *The International Journal of Technology Enhanced Learning*, vol. 3, no. 4, (2011) . Inderscience Publishers, pp. 415-429.
- T2. **Alexopoulos, P., Pavlopoulos, I., & Mylonas, P.** "A Semantic Framework for Harvesting Vague Enterprise Knowledge from Microposts." *International Journal on Artificial Intelligence Tools*, vol. 23, no. 2, (2014).
- T3. **Tsatsaronis, G., Balikas, G., Malakasiotis, P., Partalas, I., Zschunke, M., Alvers, M., Weissenborn, D., Barley, A., Petridis, S., Polychronopoulos, D., Almyrantis, G., Pavlopoulos, I., Baskiotis, N., Gallinari, P., Artieres, T., Ngomo, A.-C., Heino, N., Gaussier, E., Barrio-Alvers, L., Schroeder, M., Androutsos, I., & Paliouras, G.** "An overview of the bioasq large-scale biomedical semantic indexing and question answering competition." *BMC Bioinformatics*, vol. 16, no. 1, (2015).
- T4. **Kougia, V., Pavlopoulos, I. (corresponding author), PapapEtrou, P.** "RTEx: A novel framework for Ranking, Tagging, and Explanatory diagnostic captioning of radiography exams." *Journal of the American Medical Informatics Association*, vol. 28, no. 8, August (2021), pp. 1651-1659. <https://doi.org/10.1093/jamia/ocab046>
- T5. **Olczak, J., Pavlos, I., Prijs, J., Ijpma, F. F. A., Doornberg, J. N., Lundstrom, C., Hedlund, J., and Gordon, M.** "Presenting artificial intelligence, deep learning, and machine learning studies to clinicians and healthcare stakeholders: an introductory reference with a guideline and a Clinical AI Research (CAIR) checklist proposal." *Acta Orthopaedica*, (2021).
- T6. **Pavlopoulos, I., Kougia, V., Androutsopoulos, I., Papamichael, D.** "Diagnostic Captioning: A survey." *Knowledge and Information Systems*, 16 Jun. (2022), pp. 1-32. <https://doi.org/10.1007/s10115-022-01684-7>
- T7. **AelAel, I., Sommerschild, T., Shillingford, B., Bordbar, M., Pavloopoulos, I., Hatzipanagiotou, M., Androutsos, I., Prag, J., de Freitas, N.** "Restoring and attributing ancient texts using deep neural networks." *Nature*, vol. 603, (2022), pp. 280-283. <https://doi.org/10.1038/s41586-022-04448-z>
- T8. **Pavlopoulos, I., Konstantinidou, M.** "Computational Authorship Analysis of the Homeric Poems." *International Journal of Digital Humanities*, (2022), pp. 1-20. <https://doi.org/10.1007/s42803-022-00046-7>
- T9. **Xenos, A., Pavlopoulos, I., Androutsopoulos, I., Dixon, L., Sorensen, J., Laugier, L.** "Toxicity detection sensitive to conversational context." *First Monday*, (2022), <https://doi.org/10.5210/fm.v27i5.12285>.
- T10. **Pavlopoulos, I., Lucas, A.** "Distance from Unimodality for the Assessment of Opinion Polarization." *Cognitive Computation*, (2023), <https://doi.org/10.1007/s12559-022-10088-2>.

Initials:

- M1. Pavlopoulos I. (2009). Implementation and Comparison of models addressing Automatic Text Illustration, MSc thesis, University of Edinburgh, Department of Computer Science, UK.
Supervisor: Prof. Mirela Lapata.
- M2. Pavlopoulos I. (2014). Aspect Based Sentiment Analysis. PhD thesis, Department
Department of Informatics, Athens University of Economics and Business, Supervisor: Prof.
Ion Androutsopoulos.

PARTICIPATION IN RESEARCH PROJECTS

- [EFRA](#): Research project (EU Horizon) for the automatic detection of product recall from web texts and other data (2022-2025).
- [NLP for digital Art History](#): Research project on Natural Language Processing in History of Art (2021-2022).
- [Autograde](#): Research project for automatic scoring/evaluation of electronics exams (2021).
- Research project for the European Union (European Commission) for development cost model for moderating user comments on online platforms (2020). Principal investigator (Co2).
- ConvAI - Context-aware abusive language detection in online conversations. Unconditional research support project funded by Google (Google Research Award, 2019). Principal investigator (Co1).
 - [ML2P Filter](#) - Machine learning to filter profanity. Google Digital News Initiative (DNI) project.
Principal investigator (2016-2018).
- [BioASQ](#), European project FP7 ICT. Research associate (2012-2014).

OTHER PROVICATION OF THE PROCTION OF THE

Reviewer of leading international conferences such as: NIPS (from 2022), ACL, EMNLP, COLING (from 2022), NAACL-HLT, and journals such as: Natural Language Engineering, Data Mining and Knowledge Discovery. Member of the Abusive planning committee Language Workshop. Member of the editorial board of the International Journal for Public and Digital Humanities.